

WHAT IS CLAIMED IS:

1. A photoelectric conversion device, comprising:

a photoelectric conversion substrate composed of a substrate and a plurality of photoelectric conversion elements installed in the substrate;

5 a light source; and

an outer casing for housing the photoelectric conversion substrate and the light source,

wherein, between a reading-out period for

10 obtaining image data and a non-reading-out period during which reading out is not carried out, the light source is turned on in the non-reading-out period.

2. The photoelectric conversion device according

15 to claim 1, wherein a plurality of switching elements are further installed on the photoelectric conversion substrate.

3. The photoelectric conversion device according

20 to claim 2, wherein the photoelectric conversion elements and the switching elements comprise at least an amorphous silicon layer.

4. The photoelectric conversion device according

25 to claim 1, wherein, the light source is LED, EL, a cathode ray tube, or a semiconductor laser.

5. The photoelectric conversion device according
to claim 1, wherein the light source emits light rays
having a wavelength region within which the
photoelectric conversion elements have light
5 absorption.

6. The photoelectric conversion device according
to claim 1, further comprising a wavelength converter
for converting radiation to visible light rays.

10

7. The photoelectric conversion device according
to claim 6, wherein the wavelength converter contains
at least any one of Gd_2O_2S , Gd_2O_3 , or CsI .

15

8. A photoelectric conversion device, comprising:
a substrate provided with a plurality of
photoelectric conversion elements for carrying out
photoelectric conversion of incident light rays having
image data; and

20

light sources for radiating light rays having the
image data and light rays having no image data to a
plurality of the photoelectric conversion elements.

25

9. The photoelectric conversion device according
to claim 8, further comprising a wavelength converter.

10. The photoelectric conversion device according

to claim 9, wherein the wavelength converter contains at least any one of $\text{Gd}_2\text{O}_2\text{S}$, Gd_2O_3 , or CsI .

11. The photoelectric conversion device according
5 to claim 8, wherein the light sources are composed of any one of LED, EL, a cathode ray tube, or a semiconductor laser.

12. An image data processing system, comprising:
10 a photoelectric conversion device comprising a substrate provided with a plurality of photoelectric conversion elements and a light source for radiating light rays having no image data to a plurality of the photoelectric conversion elements;
15 a radiation source; and control means for independently controlling the radiation source and the photoelectric conversion device.

20 13. The image data processing system according to claim 12, further comprising a wavelength converter.

14. The image data processing system according to claim 13, wherein the wavelength converter contains at
25 least any one of $\text{Gd}_2\text{O}_2\text{S}$, Gd_2O_3 , or CsI .

15. The image data processing system according to

claim 12, wherein the control means drives the radiation source during a period for reading out image data and operates the light source during a period of not reading out image data.

5

16. A driving method of an image data processing system which comprises a first and a second light sources, a semiconductor element having a semiconductor layer having an absorption region in a wavelength of 10 light rays radiated from the second light source, and control means for independently controlling the first and the second light sources, comprising the steps of:

radiating light rays of the first light source during an image-pickup period and reading out image 15 data; and

radiating light rays of the second light source during an non-image-pickup period.

17. A radiation detection apparatus, comprising:
20 a photoelectric conversion substrate composed of a substrate and a plurality of photoelectric conversion elements installed in the substrate; and
an outer casing housing the photoelectric conversion substrate,
25 wherein the outer casing further contains a light source.

18. The radiation detection apparatus according
to claim 17, further comprising a wavelength converter
and wherein light rays from the light source are
reflected by the wavelength converter to lead the light
5 rays to the photoelectric conversion elements.

19. The radiation detection apparatus according
to claim 17, wherein each of the photoelectric
conversion elements comprises a first electrode layer,
10 an insulating layer for inhibiting flow of both of a
first carrier and a second carrier with different
polarity from that of the first carrier, a
photoelectric conversion semiconductor layer, an
injection inhibiting layer for inhibiting injection of
15 the first carrier in the semiconductor layer, and a
second electrode layer.

009314165-0072500